Intermec

User's Guide

EasyCoder C4 Bar Code Label Printer

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International Notices

FCC Notice (United States of America)

WARNING

This equipment generates, uses, and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. It has been tested and found to comply with the limits for a Class A computing device pursuant to Subpart J of Part 15 of FCC Rules, which are designed to provide reasonable protection against such interference when operated in a commercial environment. Operation of this equipment in a residential area is likely to cause interference in which case the user at his own expense will be required to take whatever measures may be required to correct the interference.

DOC Notice (Canada)

Canadian Dept. of Communication
REGULATIONS COMPLIANCE (DOC-A)

This digital apparatus does not exceed the class A limits for radio noise emissions from a digital apparatus as set out in the radio interference regulations of the Canadian Department of Communication.

Ministère des Communications du Canada
CONFORMITE DE REGLEMENTS (DOC-A)

Le présent appareil numérique n´émet pas de bruits radio-électriques dépassant les limites applicables aux appareils numériques de classe A prescrites dans le règlement sur brouillage radioélectrique édicté par le Ministère des Communications du Canada.

EU Standard EN 55022 (The European Union)

WARNING

This is a Class A ITE product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

Wichtige Sicherheitshinweise

1. Bitte lesen Sie diese Hinweis sorgfältig durch.
2. Heben Sie diese Anleitung für den späteren Gebrauch auf.
3. Das Gerät ist vor Feuchtigkeit zu schützen.
4. Beachten Sie beim Anschluß an das Stromnetz die Anschlußwerte.
5. Wird das Gerät über einen längeren Zeitraum nicht benutzt, sollten Sie es vom Stromnetz trennen. Somit wird im Falle einer Überspannung eine Beschädigung vermieden.
6. Durch die Lüftungsöffnungen dürfen niemals Gegenstände oder Flüssigkeiten in das Gerät gelangen. Dies könnte einen Brand bzw. elektrischen Schlag auslösen.
7. Öffnen Sie niemals das Gerät. Das Gerät darf aus Gründen der elektrischen Sicherheit nur von autorisiertem Servicepersonal geöffnet werden.
8. Wenn folgende Situationen auftreten ist das Gerät vom Stromnetz zu trennen und von einer qualifizierten Servicestelle zu Überprüfung.
   a. Flüssigkeit ist in das Gerät eingedrungen.
   b. Das Gerät war Feuchtigkeit ausgesetzt.
   c. Wenn das Gerät nicht der Bedienungsanleitung entsprechend funktioniert oder Sie mit Hilfe dieser Anleitung keine Verbesserung erzielen.
   d. Das Gerät ist gefallen und/oder das Gehäuse ist beschädigt.
   e. Wenn das Gerät deutliche Anzeichen eines Defektes aufweist.
9. Nur mit dem Schaltnetzteil Intermec/SPN-470-24 benutzen.

Safety Instructions

1. Please read these safety instructions carefully.
2. Please keep this User's Guide for later reference.
3. Please protect this equipment from humidity.
4. Check the voltage of the power source before connecting the equipment to the power outlet.
5. If the equipment is not used for long time, disconnect the equipment from the AC voltage to avoid damage by transient over voltage.
6. Never pour any liquid into any openings, this could cause fire or electrical shock.
7. Never open the equipment. For safety reason, the equipment should only be opened by qualified service personnel.
8. If one of the following situations arises, get the equipment checked by a service personnel:
   a. Liquid has penetrated into the equipment.
   b. The equipment has been exposed to moisture.
   c. The equipment does not work well or you can not get it work according to the User's Guide.
   d. The equipment has dropped and been damaged.
   e. If the equipment has obvious signs of breakage.
9. For use only with power supply Intermec/SPN-470-24.

Declaration of Conformity (CE)

We,

Intermec Printer AB
Idrottsvägen 10
Box 123
S-431 22 Mölndal
Sweden

declare under our sole responsibility[1] that the product

EasyCoder C4

to which this declaration relates
is in conformity with the following standards

Safety:
EN 60 950:1992 +A1 +A2 +A3 +A4 +A11

EMC:
Based upon EN 50081-2 Generic Emissions Standard
EN 55 022:1994
EN 61 000-3-2/A12
Based upon EN 50 082-1 Generic Immunity Standard
EN 61 000-4-2:1995
EN 61 000-4-3:1996
ENV 50 204:1995
EN 61 000-4-4:1995
EN 61 000-4-6:1996

following the provisions of Directives

89/336/EEC and **73/23/EEC**

Mölndal 2002-06-03

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Per-Ove Jacobsson
Site Manager

[1] /. Intermec assumes no responsibility regarding the CE Directive if the printer is handled, modified, or installed in other manners than those described in the manuals.

Introduction

Note!
The 300 dpi version will not be available before the fall of 2002.

Intermec EasyCoder C4 is a series of dedicated direct thermal and combined thermal transfer/direct thermal printers with a print-head density of 203.2 dots per inch (8 dots per mm) or 300 dots per inch (11.81 dot per mm).

The EasyCoder C4 printers are fitted with both a parallel Centronics port and a serial RS-232 port.

As an option, the EasyCoder C4 can be fitted with a paper cutter that cuts continuous strip or liner between labels.

All EasyCoder C4 printers are delivered with the Intermec InterDriver for Microsoft Windows 95/98/Me, and Windows NT 4.0/W2000/XP. The InterDriver makes it possible to produce printouts from most standard programs run under the various versions of MS Windows.

Label design becomes an easy task with Intermec LabelShop, a series of "what-you-see-is-what-you-get" PC label-editing programs and compatible with the full range of Intermec EasyCoder printers. Intermec LabelShop START is included in the delivery.

EasyCoder C4 can also be run using ESim control commands described in the *EasyCoder ESim v3.33, Programmer's Reference Manual*. These control commands use short lines of ASCII characters to format the labels, enter text and bar codes and control the printing, making it possible to use a terminal or personal computer, that does not operate under MS Windows.

For comprehensive technical data, refer to Appendix 1.

Installation

Unpacking

Before starting the installation, carefully examine the delivery for possible damage or missing parts:

1. Open the box and lift up the power supply unit, cables, and other parts.
2. Remove the upper foam-plastic shock absorber and lift up the printer. Check that no visible damage has occurred during the transportation. Keep the packing material in case you need to move or reship the printer.
3. Check to make sure any options ordered are included.
4. Check the accessories included in the delivery. In addition to possible options, the box should contain:
   - Intermec EasyCoder C4 printer
   - Power Supply unit with either one power cord for 115V U.S. wall sockets or two different power cords for 230V European and 240V U.K. wall sockets
   - Parallel communication cable
   - Empty ribbon core (thermal transfer printers only)
   - Sample roll of labels
   - Media roll spindle
   - Quick-Start Guide
   - Manuals and an assortment of application software on CD-ROM.

Should any kind of damage have occurred during transportation, immediately make a complaint to the carrier.

Any incorrect delivery or missing parts should be reported to the distributor.

CAUTION!

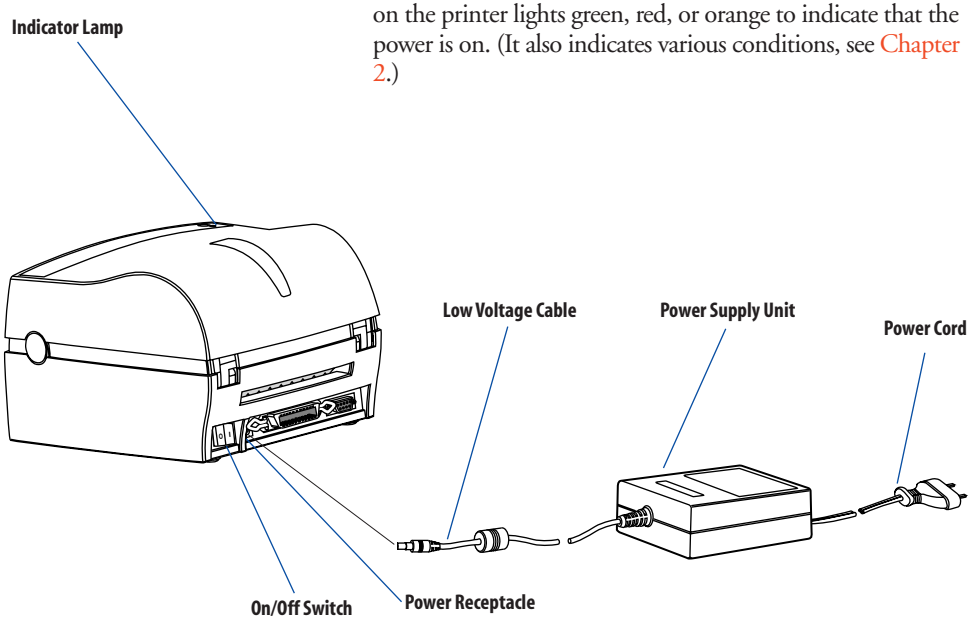
The discharge of electrostatic energy accumulated on the human body, the clothing, or other surfaces can damage or destroy the printhead or electronic components used in this printer. Avoid touching the electrical connectors while unpacking and setting up the printer.

Power Connection

1. Place the printer in a suitable location that allows easy access to printed labels and preferably also easy reload of media and transfer ribbon. The printer should only be operated while resting on a horizontal surface, like a table or similar.

> ***WARNING!***
> *The printer and power supply unit must never be operated in a location where they can get wet. Personal injury could result! Only use with power supply Intermec SPN-470-24 P/N 1-092515-XX Mfg by PROTON.*

2. Place the power supply in a suitable location between the printer and an electrical outlet, for example on the floor. The power supply can be used for 100 to 240 VAC, 50 to 60 Hz. The configuration of the power cord plug differs according to national standards.
3. Check that the printer's On/Off switch at the back is off (O).
4. First, fit the round connector into the power receptacle on the printer's rear plate. Then connect the power cord between the power supply and an AC wall socket.
5. The power can be switched on/off by means of the On/Off switch situated at the back of the printer. The indicator lamp on the printer lights green, red, or orange to indicate that the power is on. (It also indicates various conditions, see Chapter 2.)



Memory Cartridge

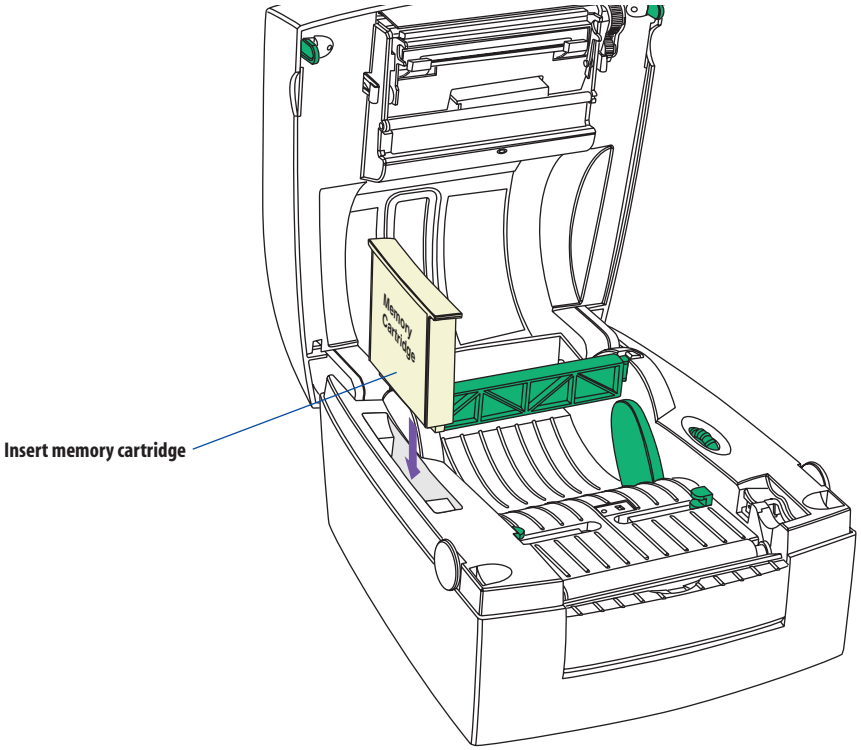
The EasyCoder C4 is fitted with a built-in flash memory where 200K is available to the user for storing forms, graphics, and fonts (see Appendix 1 for details).

The built-in memory can be expanded by means of an exchangeable memory cartridge with 1MB flash memory and/or 256K SRAM.

Important!
When fitting or removing a memory cartridge, the power to the printer must be off!

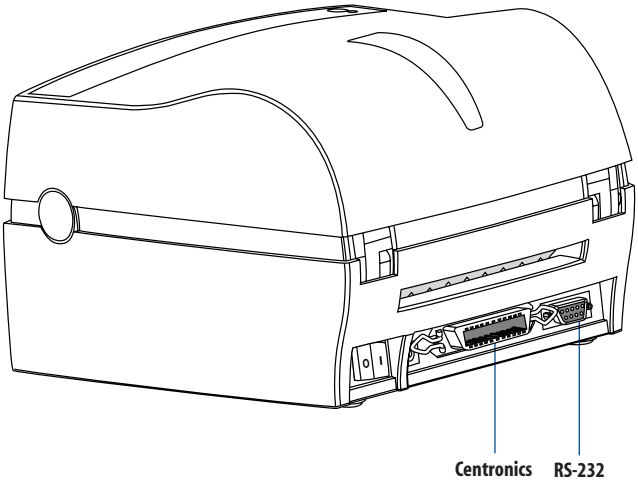
Installation of Memory Cartridge

1. Ensure that the On/Off switch on the printer is off (0).
2. Open the top cover by pressing the two locks on either side.
3. Remove the cartridge slot cover located to the left of the media roll. Be careful not to drop it inside the printer.
4. Insert the memory cartridge into the cartridge slot. Its slightly curved shape ensures that it can only be fitted correctly. Push firmly to seat the cartridge.
5. Firmly close the top cover and switch on the power.



Computer Connection

All EasyCoder C4 models are fitted with a 36pin female Centronics connector for the parallel interface port and a DB-9pin female connector for the RS-232 serial interface port. You can have cables connected to both of these ports simultaneously, but only one can be used at a time.



Centronics Parallel Interface

If you intend to use the Intermec InterDriver or any version of Intermec LabelShop, connect the parallel communication cable delivered between the printer's Centronics interface connector and the parallel port of your PC (LPT1).

The parallel interface can also be used for programming the printer by means of the ESim protocol described in the *Intermec ESim v3.33, Programmer's Reference Manual*. However, prompts and other information from printer to host cannot be transmitted, since the parallel interface is one-way (host-to-printer) only.

Computer Connection, cont.

Serial RS-232 Interface

The serial RS-232 channel is intended for running the ESim protocol described in the *Intermec ESim v3.33, Programmer's Reference Manual*. It is not suited for the Intermec InterDriver driver.

The RS-232 communication setup is variable by means of the **Y** command (see *Intermec ESim v3.33, Programmer's Reference Manual*).

Use the Test Mode to check the printer's present setup (bold characters indicate default setup).

Baud rate :	1200, 2400, **9600**, or 19200
Parity:	**None**, Odd, or None
Data bits:	7 or **8**
Stop bits:	**1** or 2
Flow control:	XON/XOFF and DSR/CTS

Note:
No serial communication cable is included in the delivery unless specifically ordered. For pinout specifications, please refer to Appendix 3.

Software Installation

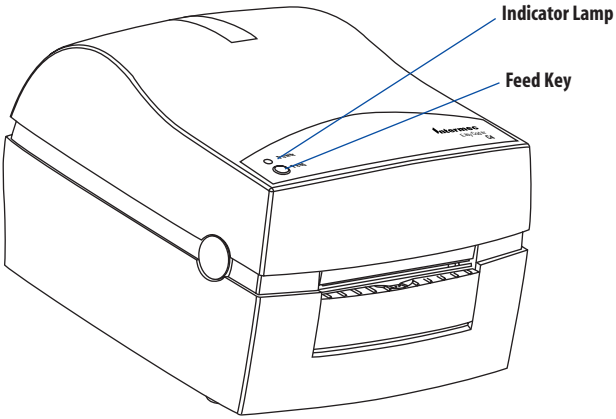
If you run your EasyCoder C4 from a PC under Windows 95/98/Me, or Windows NT 4.0/W2000/XP, you may want to install the Intermec InterDriver and the Intermec LabelShop START found on the CD-ROM that comes with the printer. If you use any other operating system, you will need to use the ESim protocol described in the *Intermec ESim v3.33, Programmer's Reference Manual* (which of course also supports Windows). Updates and installation instructions are available at the Intermec home page *http://www.intermec.com*.

Note that there are different firmware for the 202.3 dpi (8 dots/mm) and the 300 dpi (11.81 dots/mm) versions.

Operation

Controls and Indicators

The EasyCoder C4 is controlled by the operator by means of an On/Off switch, a "Feed" key and a multi-color indicator lamp.



On/Off Switch

The On/Off switch is located at the back of the printer.

Indicator Lamp

When the power to the printer is switched on, the indicator lamp will glow **green** if the printer is loaded with media and – in case of thermal transfer printing – ribbon.

If the printer is out of media and/or ribbon, the indicator lamp will glow **red**.

Any error condition, such as label stop sensor problems, media jams, or software errors, will be indicated by the lamp changing to **orange**, except for media jams in the optional cutter, which are indicated by long red flashes.

If the indicator lamp fails to work as described above, please refer to Chapter 4 *"Troubleshooting"*.

Color	Meaning
Green (solid)	Media loaded Ribbon loaded[1]
Green (flashing)	Receiving data Test Mode
Red (solid)	Out of media, or Out of ribbon[1] Printer reset
Red (short flashes)	Upgrading firmware Overtemperature
Red (long flashes)	Media jam in cutter
Orange	Error condition detected
Dark	Power Off

[1]. Thermal transfer printing only

Controls and Indicators, cont.

Feed Key

The Feed key can be used in two ways:

- Tapping
- Holding

When power is first applied and the printer is loaded with media (and possibly ribbon), **tapping** the Feed key will initiate a form-feed, that is, media will be fed out to the top of next label or tag.

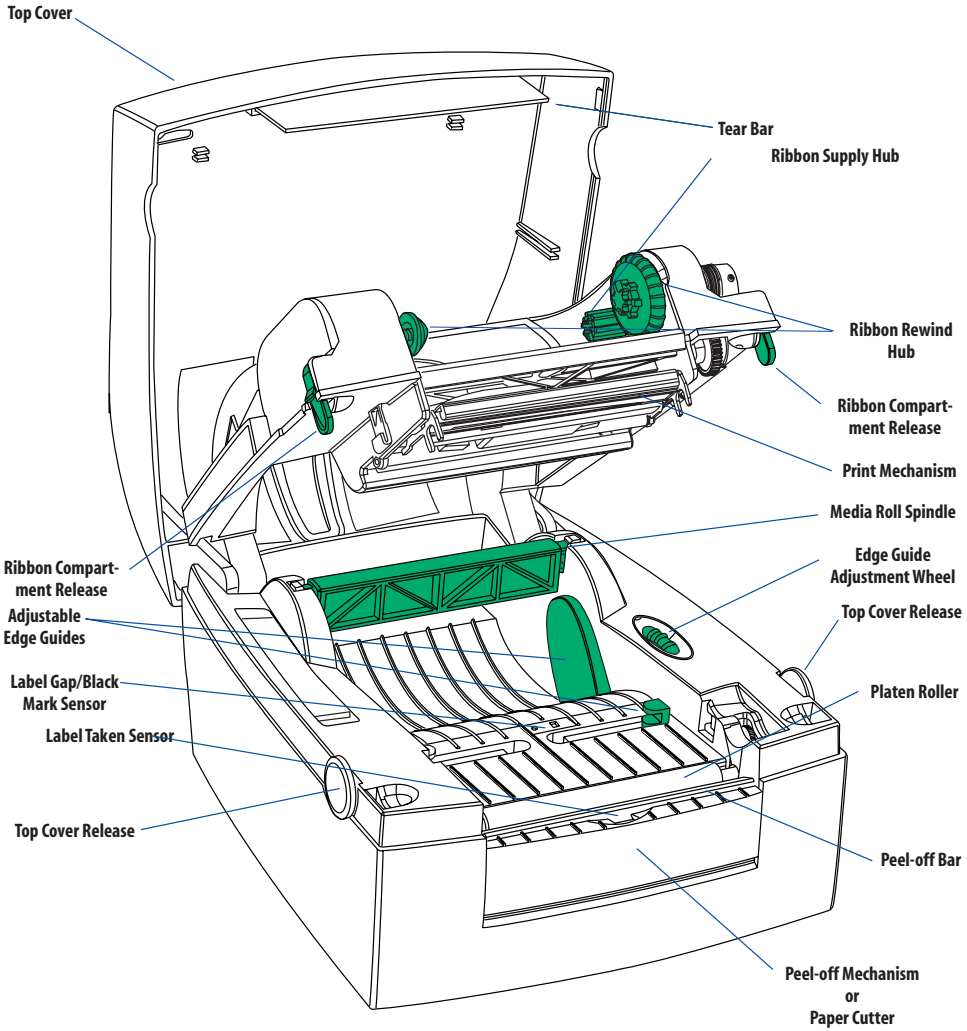
When power is first applied with no labels loaded, **holding** the Feed key will cause the media to be continuously fed out until the key is released. This mode is useful when replenishing the media supply.

After the media has been threaded through the printer, **tapping** the Feed key 3 more times (for a total of 4 taps) will cause a formfeed.

Media Compartment

The media compartment accommodates the media supply and, in case of thermal transfer capable printers, also the transfer ribbon supply (see illustration below).

In dedicated direct thermal printers, the top cover and the print mechanism are combined into a single unit.



Media Load

IMPORTANT!
If the printer runs out of media while printing, do not switch off the power during reload, or data will be lost!

Introduction

The EasyCoder C4 can print on heat-sensitive direct thermal paper, and in case of the thermal transfer model also on non heat-sensitive receiving face materials, in the form of self-adhesive labels, non-adhesive tags, or continuous stock. In case of non heat-sensitive face materials, a suitable thermal transfer ribbon must be used.

The media stock can be accommodated inside the printer in the form of a roll, or be placed behind the printer and inserted through a slot in the cover (for example fan-folded tickets or tags).

Three types of operation are available, Tear-Off (Straight-through), Peel-Off (Self-Strip), and Cut-Off:

- **Tear-Off**
  Tear-off (Straight-through) means that the media is fed straight out from the front of the printer and can be torn-off manually by pulling it upwards against the edge of the print-head. Tear-off mode can for example be used for tearing off tags at the perforation, or tearing off the liner (backing paper) between labels.
- **Peel-Off**
  Peel-off (Self-strip) means that self-adhesive labels are automatically separated from the liner (backing paper) after printing. It cannot be used in connection with a paper cutter. The labels are fed straight out from the printer, whereas the liner is fed out separately from a slot further down on the printer's front, from where it can be lead to for example a waste basket. Be careful when loading self-adhesive labels. If labels are not flat on the liner, the exposed edges can stick to your printer and cause problems.
- **Cut-Off**
  Cut-off requires an optional paper cutter fitted in place of a peel-off device and means that the liner of self-adhesive labels is automatically cut between labels or non-adhesive contionuous strip is cut into tickets and tags. The cutter is not designed to cut through any adhesive, which would stick to the cutting shears and prevent the cutter from operating.

The built-in Label Taken Sensor (LTS) can be enabled to hold the printing until the previous label (or similar) has been removed from the printer's outfeed slot. As long as the sensor detects a label, the printer will be BUSY and cannot receive data from host.

Media Load, cont.

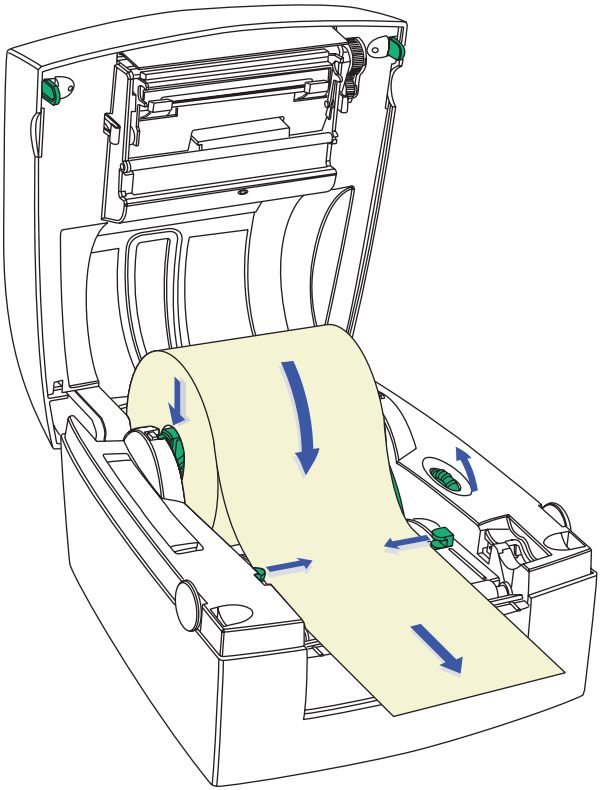
If using the ESim protocol described in the *ESIM v3.33, Programmer's Reference Manual*, note the following:

- The LTS can be enabled/disabled by an **O** command.
- When switching between peel-off, tear-off operation and cut-off operation, the media feed must be readjusted by means of a **j** command.

*The Intermec InterDriver provides options for selecting the following modes of operation without any **j** or **O** commands having to be entered by the operator:*

- *Tear-off*
- *Peel-off with LTS enabled*
- *Peel-off with LTS disabled*

Media Load, cont.



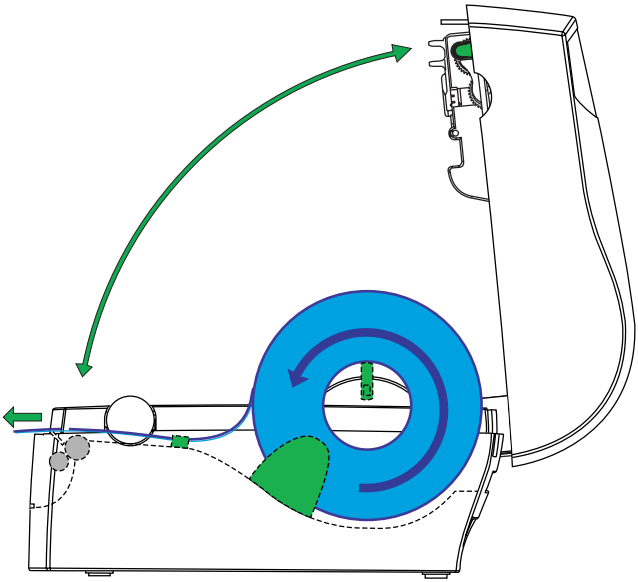
Tear-Off Operation

1. Open the printer's top cover by pressing the release buttons on both sides and folding the cover upwards/rearwards.
2. Pull up the spindle and remove possible remaining media or empty label roll core.
3. Place the spindle into the core of a fresh media roll. Rotate the spindle according to the inner diameter of the media roll core (see markings on the spindle).
4. Wind the green edge guide wheel towards the front of the printer so you can fit the media roll between the guides.
5. Place the media roll and spindle in the media compartment and snap the spindle into the slots on either side.
6. Wind the green edge guide wheel towards the rear of the printer so the rear edge guides just touch the roll without actually breaking its rotation.

Media Load, cont.

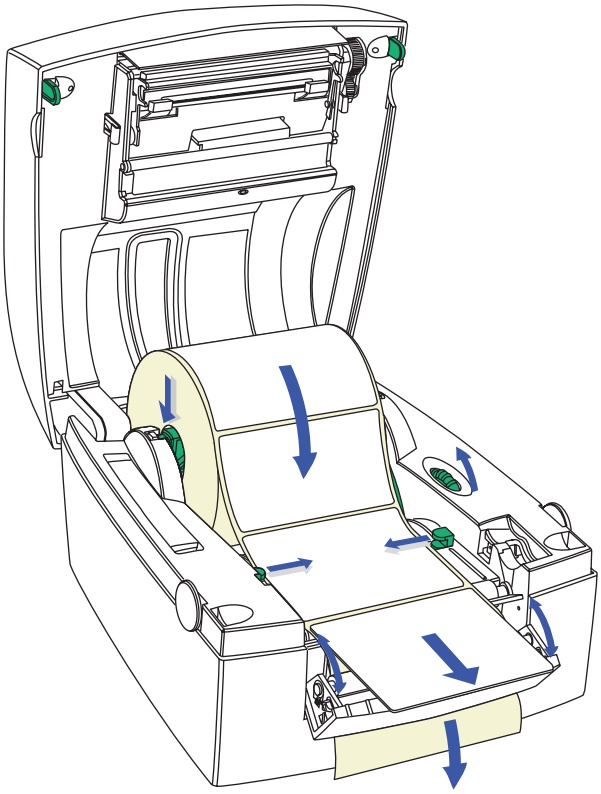
Tear-Off Operation, cont.

7. Route the media through the slits in the front edge guides
8. Firmly close the top cover.
9. If loading media for the first time or if changing from another type or size of media, perform a Label Gap Sensor Adjustment as described on page 26. Else, tap the Feed key either 4 times or until the indicator lamp glows green.
10. If the printer did run out of media while printing, the printing will automatically be resumed. Else, tear off excessive media by pulling it upwards against the tear bar.



Tear off the media upwards against the tear bar.

Media Load, cont.



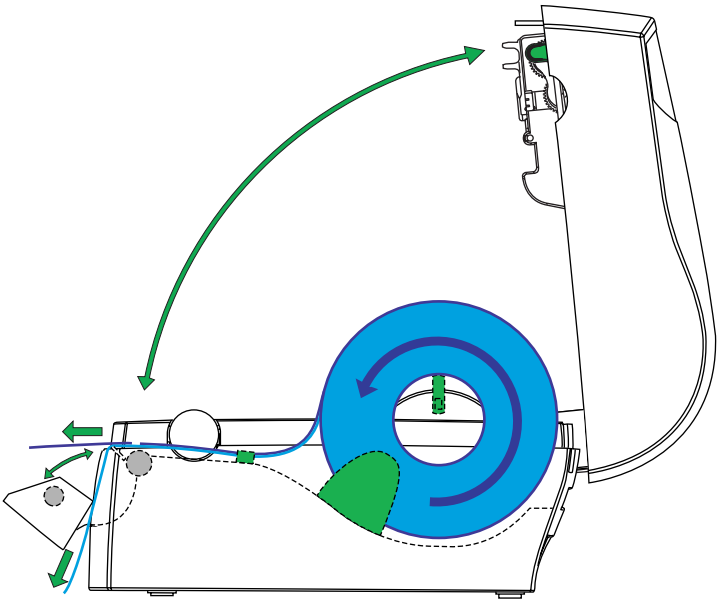
Peel-Off Operation

1. Open the printer's top cover by pressing the release buttons on both sides and folding the cover upwards/rearwards.
2. Open the peel-off mechanism at the printer's front.
3. Pull up the spindle and remove possible remaining labels or empty label roll core.
4. Place the spindle into the core of a fresh label roll. Rotate the spindle according to the inner diameter of the label roll core (see markings on the spindle).
5. Wind the green edge guide wheel towards the front of the printer so you can fit the label roll between the guides.
6. Place the label roll and spindle in the media compartment and snap the spindle into the slots on either side.

Media Load, cont.

Peel-Off Operation, cont.

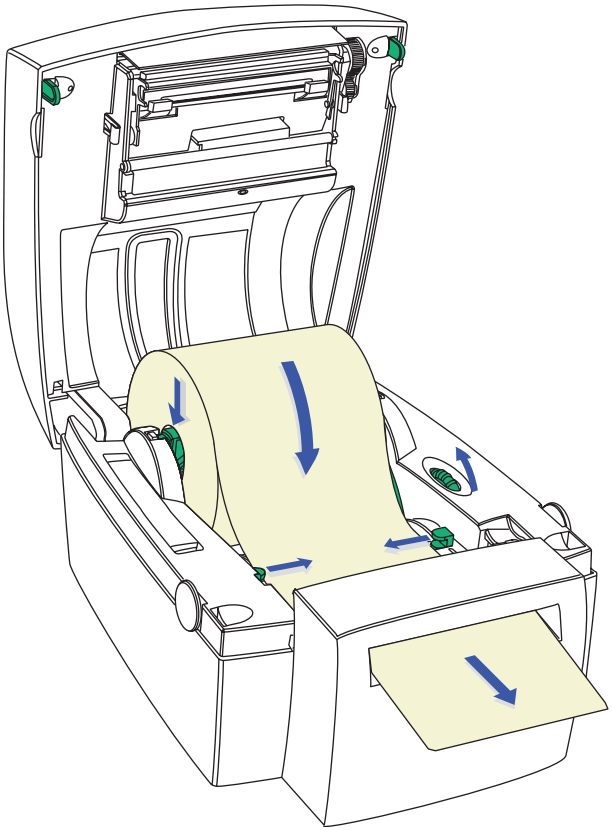
7. Wind the green edge guide wheel towards the rear of the printer so the rear edge guides just touch the label roll without actually breaking its rotation.
8. Thread the labels through the slits in the front edge guides.
9. Peel away the labels from the first 10 cm (4 inches) or so of the liner.
10. Thread the liner around the peel-off bar and insert it inside the peel-off mechanism so it protrudes from the slot below the mechanism.
11. Hold the labels while pulling at the liner so it becomes tight, then close the peel-off mechanism.
12. Firmly close the top cover.
13. If loading labels for the first time or if changing from another type or size of media, perform a Label Gap Sensor Adjustment as described on page 26. Else, tap the Feed key either 4 times or until the indicator lamp glows green.
14. If the printer did run out of labels while printing, the printing will automatically be resumed.



Media Load, cont.

Note that the cutter cannot be used to cut through labels—only through the liner between labels—or the adhesive will stick to the cutting parts and prevent the cutter from operating properly.

Media rolls must be wound with the printable side facing outward to prevent jamming the cutter.



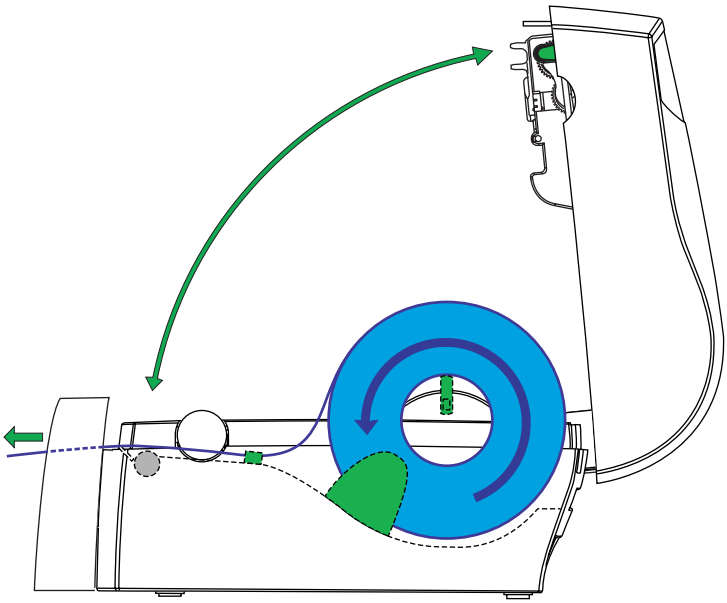
Cut-Off Operation

1. Open the printer's top cover by pressing the release buttons on both sides and folding the cover upwards/rearwards.
2. Pull up the spindle and remove possible remaining media or empty media roll core.
3. Place the spindle into the core of a fresh media roll. Rotate the spindle according to the inner diameter of the media roll core (see markings on the spindle).
4. Wind the green edge guide wheel towards the front of the printer so you can fit the roll between the guides.
5. Place the roll and spindle in the media compartment and snap the spindle into the slots on either side.

Media Load, cont.

Cut-Off Operation, cont.

7. Wind the green edge guide wheel towards the rear of the printer so the rear edge guides just touch the media roll without actually breaking its rotation.
8. Thread the labels through the slits in the front edge guides.
9. Route the media through the slot in the optional cutter mechanism just in front of the tear bar.
10. Firmly close the top cover.
11. If loading media for the first time or if changing from another type or size of media, perform a Label Gap Sensor Adjustment as described on page 26. Else, tap the Feed key either 4 times or until the indicator lamp glows green.
12. If the printer did run out of media while printing, the printing will automatically be resumed.



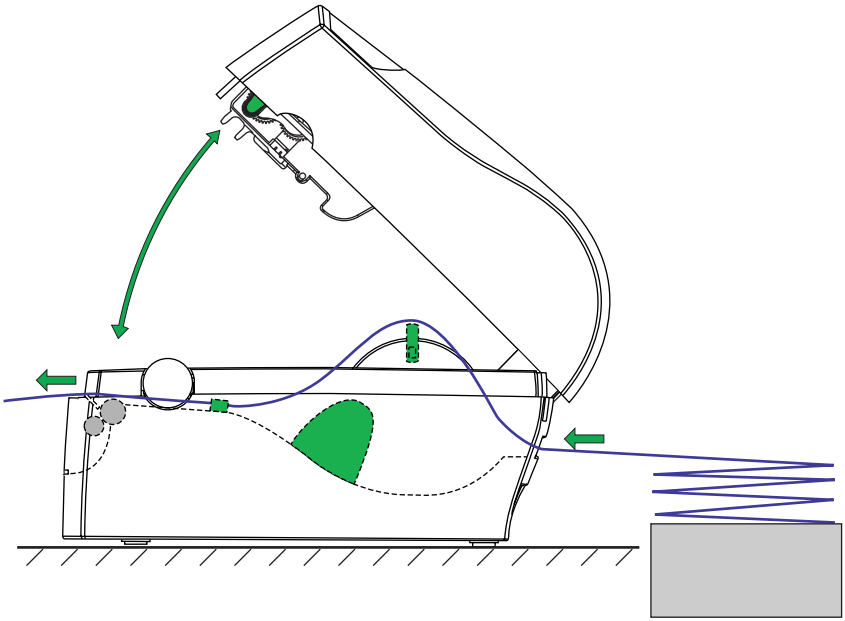
Media Load, cont.

External Supply

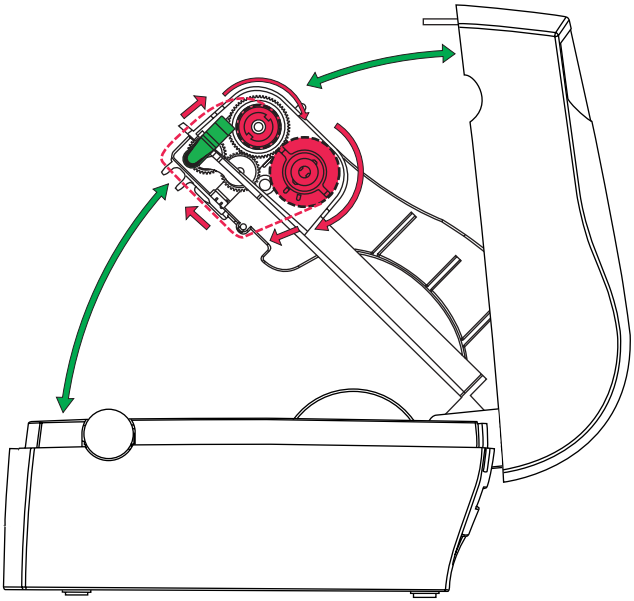
Regardless of model and type of operation, direct thermal media or receiving face material (in the form of tags or labels) can be provided from an external supply, for example a stack of fan-folded tags.

Follow the loading instructions for the type of operation in question, but ignore all paragraphs concerning the internal spindle. Instead, insert the media through the slot at the back of the printer (see illustrations).

Be careful to protect any external media supply from dirt, grit, dust, water, and direct sunlight.



Ribbon Load



Thermal transfer ribbons are only required when printing on non heat-sensitive receiving face materials. The type of transfer ribbon should match the face materials, as to obtain the best durability and printout quality.

Loading a Fresh Ribbon Roll

1. Open the printer's top cover by pressing the release buttons on both sides and folding the cover upwards/rearwards.
2. Press the green release tabs at the bottom of the top cover on both sides of the printhead and fold down the print carriage halfway (45° angle) while keeping the top cover fully opened.
3. Remove front core with the used-up ribbon and the empty core at the rear. Keep the empty core!
4. Unpack a fresh roll of transfer ribbon and route the ribbon leader down in front of the wall, that separates the print carriage from the media compartment, so the ribbon will feed from the top of the roll with the ink-covered side facing rearwards.
5. Install the ribbon roll in the rear position by placing one end over the left-side hub and pushing to the left. Then align the right end with the right-side hub and engage.

Ribbon Load, cont.

Loading a Fresh Ribbon Roll, cont.

6. Similarly, install an empty core in the rewind (front) position.
7. Route the end of the transfer ribbon forward under the printhead and up in front of it. Using the tape fitted at the front of the ribbon leader, affix the leader to the top of the rewind core. Be careful to center-align the leader with the core.
8. Wind the green wheel on the right side of the rewind hub clockwise to wind up the leader onto the rewind core until the black ink-coated ribbon becomes visible. Remove any slack.
9. If so required, also load a fresh supply of receiving face material, for example labels, according to instructions earlier in this chapter.
10. Close the print carriage by pressing it firmly down simultaneously on both sides. A loud click indicates locked position.
11. Firmly close the printer's top cover.
12. Tap the Feed key until the indicator lamp becomes green.

Note:
One roll of thermal transfer ribbon roughly corresponds to two rolls of tags or labels.

Ribbon Load, cont.

Removing a Partially Used Ribbon

When switching between direct thermal and thermal transfer printing, or when switching between different types of transfer ribbon, a partially used transfer ribbon can be removed and saved for later use.

1. Open the printer's top cover by pressing the release buttons on both sides and folding the cover upwards/rearwards.
2. Press the green release tabs at the bottom of the top cover on both sides of the printhead and fold down the print carriage halfway (45° angle) while keeping the top cover fully opened.
3. Using a pair of scissors, cut the transfer ribbon just below the rewind roll.
4. Rewind the unused ribbon onto the supply roll. Remove the roll by pushing to the left until the right end disengages and then lifting the roll up. Fasten the loose end with a piece of tape or label, to prevent the roll from unwrapping.
5. Remove the rewind roll by pushing to the left and lifting up. Unwind the used ribbon into a waste basket or similar until you can dispose of it according to local environmental regulations. Keep the core! You will need it next time you load a ribbon.

Label Gap Sensor

Adjustment

The EasyCoder C4 printer is fitted with a label gap sensor that detects slots between tickets and tags, or gaps between labels, as the media is fed past the sensor during printing. Thus the firmware can determine the length of the tags or labels and control the media/ribbon feed accordingly.

The label gap sensor is a center-aligned photoelectric sensor that measures the light that passes through the media path. The transparency of the liner of a label supply may differ between batches, making it difficult for the sensor to discriminate between labels and liner. When this occurs, the indicator lamp will switch from green to orange, indicating that sensor should be adjusted by entering the Test Mode, as described below.

Test Mode

The Test Mode can be used for four main purposes:

- To adjust the Label Gap Sensor.
- To enter the Dump Mode.
- To print a Test Label with a test pattern and a list of the printer's current setup.
- To reset the printer to its default settings.

Important!
Do not use continuous stock in the Test Mode. The printer will not be able to detect any gaps and an error will occur.

Use the Test Mode this way:

1. After having loaded the printer with full width labels, tickets, or tags, switch off the power to the printer.
2. Press and hold the **Feed** key while switching on the power.
3. Release the **Feed** key when the green indicator lamp flashes.
4. The printer will automatically adjust the label gap sensor and media feed according to the characteristics of the media. The printer may feed out 3-4 forms before the adjustment is completed. In case of peel-off operation, remove the labels as they are fed out.
5. After a delay, a Test Label will be printed and the printer will be placed in the Dump Mode (see *Intermec Esim v3.33, Programmer's Reference Manual*).

6a. Tap the **Feed** key once to switch back to normal operation, or...

6b. ...reset the printer by pressing and holding the **Feed** key for at least three seconds after the test label was printed. The indicator lamp will turn red to indicate that the printer was reset. The printer will then reboot automatically.

Refer to the Intermec ESim v3.33, Programmer's Reference Manual for illustration and explanation of the test label.

Maintenance

The Intermec EasyCoder C4 printers are manufactured and tested under a strict quality management program. Only high quality components and materials are used in the printers. Although only minimal maintenance is required, following these simple maintenance procedures will ensure longer life with quality printing performance.

External Cleaning

Keep your EasyCoder C4 clean by periodically wiping it with a soft cloth dampened with water. Do not use abrasive cleaners or solvents as they will scratch the surface.

Printhead Cleaning

We recommend using the special Cleaning Card (part number 1-110501-00) and the procedures below to clean the printhead before loading each new roll of labels or tags.

1. Switch off the power to the printer.
2. Open the top cover/print carriage.
3. Unload the media stock.
4. In case of thermal transfer printing, also remove the transfer ribbon.
5. Open the pouch and pull out the cleaning card. Be careful not to tear the card inside!
6. Insert the cleaning card under the print carriage the same way as when loading the media. Allow approximately 2 to 3 cm (1 inch) of the cleaning card to extend in front of the printhead.
7. Fold down the print carriage to locked position.
8. Use one hand to hold the printer and the other hand to pull the cleaning card forward, until the entire card has been pulled free.
9. Repeat steps 6, 7, and 8 a second time, then proceed at step 10.
10. Dispose properly of the used cleaning card and reload the media and ribbon supplies.

Troubleshooting

Problem	Solution or Reason
Power *indicator does not light green when power is on.*	• Make sure connectors on power supply are securely plugged into the receptacle on the printer and to an AC outlet.
Power *indicator lights green but printer will not feed.*	• Label taken sensor active, label not removed. • Make sure correct type of interface cable is securely plugged into both printer and computer.
Printer seems to be working but nothing is printed.	• *Direct Thermal Printing:* Verify that the media is intended for direct thermal printing by testing if the paper is blackened by the heat from a hot object (+ 70°C/160°F or more). Check that the heat-sensitive side faces the printhead. • *Thermal Transfer Printing:* Verify that the printer is loaded with thermal transfer ribbon and that the ink-coated sided faces the receiving face material.
Printing is faded.	• Clean the printhead with the cleaning card. • If printing is still faded, increase the density setup.
Prints only partial label.	• Print carriage not completely locked. • Label caught on printhead. Remove and clean.
Printer keeps printing or feeding when it should not.	• Label caught on label gap sensor. Open top cover. Remove the label and clean using cleaning card or isopropyl alcohol. • Possible firmware problem.
Printing stops and indicator lamp lights orange.	• Possible problem with label gap sensor. Perform autoadjust in the Test Mode. • Possible media jam. • Possible firmware problem.
Label stuck on roller.	• Open the peel-off mechanism and use fingers to peel away stuck label while manually rotating the roller. Do not use any sharp tools! Clean using a cleaning card or a cotton swab moistened with isopropyl alcohol.
Label taken sensor does not hold printing until label/tag has been removed.	• Label/tag bent down due to excessive length and/or too thin or soft media. • Label/tag too short (less than 16 mm/.63 inches). • Label taken sensor or cable defective.
Indicator lamp flashes red and the printing is interrupted.	• Overtemperature. Wait for the printer to cool down until the indicator lamp switches to green and – if the printing has been halted during a batch print job – the printing is automatically resumed.

Technical Data

General		
Direct thermal and/or direct thermal/thermal transfer printing on self-adhesive labels, non-adhesive tags, or continuous stock. Internal media roll or external fan-fold supply. Tear-off /peel-off or cut-off operation		
Dimensions		
Length:	259 mm	(10.20 inches)
Length with cutter:	290 mm	(11.4 inches)
Width:	230 mm	(9.06 inches)
Height:	166 mm	(6.54 inches)
Net Weight		
Thermal transfer printer, excl. power supply, media, cable, cutter, and memory cartridge:		
	2.30 kg	(5.07 lbs)
Power		
Separate power supply unit;	Input: 100 to 240 VAC/50 to 60 Hz, 1.9 A	
	Output: 24 VDC, 3.0A	
Interfaces		
1 × RS-232 serial (DB-9pin)		
1 × Centronics parallel.		
Serial Communication		
Variable; XON/XOFF and DSR/CTS protocols.		
Ambient Temperature		
Operation:	+5°C to +40°C	(+40°F to +104°F)
Storage:	-20°C to +50°C	(-4°F to +122°F)
Humidity		
10 to 90% RH, non-condensing.		
Ventilation: Free air.		
Printhead		
203.2 dots/inch (8 dots/mm) with 832 dots or 300 dpi (11.81 dots/mm) with 1208 dots		
Printable Area		
Width, max at 203.2 dpi	104.0 mm	(4.1 inches)
Width, max at 300 dpi	102.2 mm	(4.02 inches)
Length, max. (256K SRAM/203.2 dpi):	200.0 mm	(8 inches)
Length, max. (256K SRAM/300 dpi):	100.5 mm	(3.96 inches)
Media		
Roll Diameter, max:	125 mm	(5 inches)
Core Diameter, min/max:	25.4/38.1 mm	(1.0/1.5 inches)
Media Width, max:	116.0 mm	(4.57 inches)

Technical Data, cont.

Media, cont.		
Media Width, min.	25.4 mm	(1.0 inches)
Label Length, min:	6.35 mm	(.25 inches)
Max. Thickness, rolls:	0.15 mm	(.0006 inches)
Max. Thickness, fan-folds:	0.17 mm	(0.006 inches)
Min. Thickness, all:	0.06 mm	(.003 inches)
Thermal Transfer Ribbons		
Intermec transfer ribbons only (wax, hybrid, and resin) in widths of 33, 60, 63.5, 83.5, 89, and 110 mm (1.33, 2.36, 2.5, 3.29, 3.5, and 4.33 inches) centered on 110 mm (4.33 inches) wide cardboard cores.		
Core inner diameter:	13 mm	(0.5 inches)
Max. ribbon roll diameter:	41 mm	(1.6 inches).
Ink coated side facing outwards, cores with notches		
Printing Speed		
8 dots/mm	30, 40, 50, or 75 mm/sec.	(1.2, 1.6, 2, or 3 inches/sec.)
11.81 dots/mm	30, 40, or 50 mm/sec.	(1.2, 1.6, or 2 inches/sec.)
Sensors		
Label gap, label mark, label taken, out-of-media, ribbon end, print frame open/closed.		
Print Directions		
Text, bar codes, and graphics can be printed in four directions.		
Fonts		
5 resident alphanumeric fonts (can be magnified up to 8 times horizontally and 9 times vertically)		
Standard Bar Codes	Code 39 std. or extended	
	Code 39 w. check digit	
	Code 93	
	Code 128UCC case code	
	Code 128 A, B, C	
	Codabar	
	EAN 8 std, 2 digit add-on, or 5 digit add-on	
	EAN 13 std, 2 digit add-on, or 5 digit add-on	
	Interleaved 2 of 5	
	Interleaved 2 of 5 w. check digit	
	Interleaved 2 of 5 w. human readable check digit	
	Postnet 5, 6, 8 & 11 digit	
	UCC/EAN 128	
	UPC A std, 2 digit add-on, or 5 digit add-on	
	UPC E std, 2 digit add-on, or 5 digit add-on	
	UPC Interleaved 2 of 5	

Technical Data, cont.

Two-Dimensional Codes	PDF-417
	MaxiCode
	Datamatrix (requires special firmware)
Formatting	Print formats can be preprogrammed in flash memory
Flash Memory	768K total.
	(568K firmware, 200K fonts, forms, and graphics)
SRAM Memory	320K total
	202.3 dpi: 150K firmware, 170K print buffer
	300 dpi: 142K firmware, 178K print buffer
Keyboard	One "Feed" button
Display	1 multi-color LED indicator.
Options	Memory Cartridge (1MB flash and/or 256K SRAM)
	Serial Communication Cable (RS-232)
	Serial Communication Cable (RS-232)
	Parallel Communication Cable (Centronics)
	Paper Cutter
	Printhead V-spring for stiff/thick media

Media Specifications

Direct Thermal Media

Intermec offers two quality grades of **direct thermal** media for the EasyCoder range of printers:

- ***Premium Quality***: Top-coated media with high demands on printout quality and resistance against moisture, plasticizers and vegetable oils. Examples...
  - Thermal Top Board
  - Thermal Top
  - Thermal Top High Speed
  - Duratherm II,
  - Duratherm II Tag
  - Duratherm Ltg.
  - Duratherm IR
- ***Economy Quality***: Non top-coated media with less resistance to moisture, plasticizers and vegetable oils. In all other respects, it is equal to Premium Quality. Examples...
  - Thermal Eco
  - Thermal Eco Board

Thermal Transfer Media

Intermec offers **stock** media for thermal transfer printing in a wide range of quality grades.

- ***Uncoated papers*** for economical high-volume printing in combinations with GP/TMX 1100/TMX 1500 ribbons.
  Examples...
  - TTR Uncoated
- ***Coated papers*** with various coat-weight, smoothness, and gloss to be used with HP/TMX 2500 and GP/TMX 100/ TMX 1500 ribbons.
  Examples...
  - TTR Matte
  - TTR Premium
  - TTR Premium Board
  - Duratran II
  - Duratran II Tag
  - Duratran II
- ***Polyethylene plastics*** with better resistance to water and many common chemicals. They can be use outdoors and offer good tear resistance. Most often used in combination with HP/TMX 2500 ribbons. Examples...
  - TTR Polyethylene
  - TTR Gloss Polyethylene
  - Kimdura
  - Kimdura Tag
  - Syntran
- ***Polyesters***, which are the materials of choice in combination with HR/TMX 3200 ribbons that give high resistance to chemicals, heat, and mechanical abrasion. Examples...
  - TR High Gloss Polyester
  - Polyester

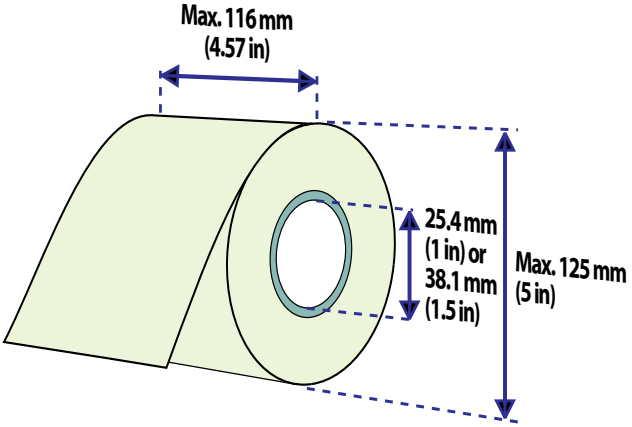
Media Roll Size

Core

Diameter:	25.4 or 38.1 mm	(1.0 or 1.5 inches)
Max. width:	118 mm	(4.65 inches)

Roll

Max. diameter:	125 mm	(5 inches)
Max. media width:	116 mm	(4.57 inches)
Min. media width:	25 mm	(1 inches)
Max. media thickness:	0.15 mm	(0.006 inches)
Min. media thickness:	0.06 mm	(0.003 inches)

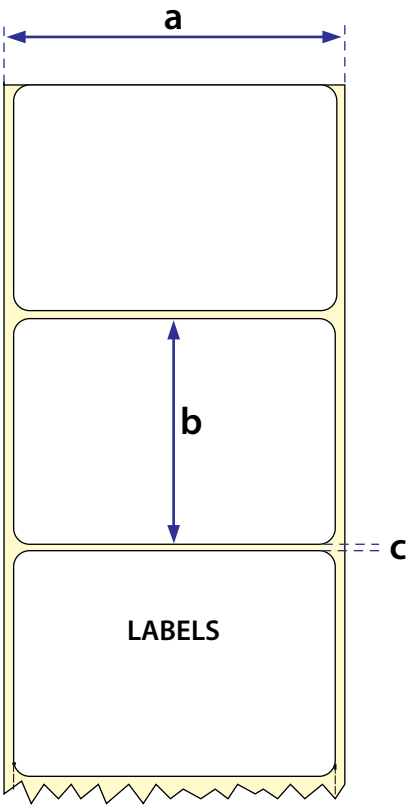


All types of media should normally be wound with the printable side facing outwards and unroll from the top of the roll. However tags and continuous strip can optionally be wound with the printable sidefacing inwards and unroll from the bottom of the roll as long as they are not used for cut-off operation.

Important!
Protect the media against sand, grit, and other hard particles during printing and storage. Keep the cover closed. Even very small foreign particles may cause severe harm to the delicate printhead.

Labels

← **a** → **Media width** (incl. liner):		
Maximum:	116.0 mm	(4.57 inches)
Minimum:	25.0 mm	(1 inches)
← **b** → **Label length:**		
Minimum:	6.35 mm	(.25 inches)
← **c** → **Label gap height:**		
Maximum:	10 mm	(.39 inches)
Minimum:	2 mm	(.08 inches)
Liner:		
Opacity:	75%	



Tags and Strip

Note:
The EasyCoder C4 can also use continuous stock without any detection slots or black marks.

The printer must be set for continuous stock by the ***Q*** *command (see ESim v3.33, Programmer's Reference Manual).*

The length of each copy is decided by the size of the print image and any additional media feed is decided by the ***Q*** *command.*

Continuous stock cannot be used in the Test (Dump) Mode.

← a → Tag or strip width:

Maximum:	116.0 mm	(4.57 inches)
Minimum:	25.0 mm	(1.00 inches)

← b → Tag length:

Minimum:	6.35 mm	(0.25 inches)

← c → Detection slot width:

Minimum:	14 mm	(0.55 inches)

← d → Detection slot height:

Maximum:	10 mm	(0.39 inches)
Minimum:	1 mm	(0.08 inches)

The label gap sensor is offset 4.5 mm (0.177 inches) to the right of the center of the media path.

← c → Black mark width:

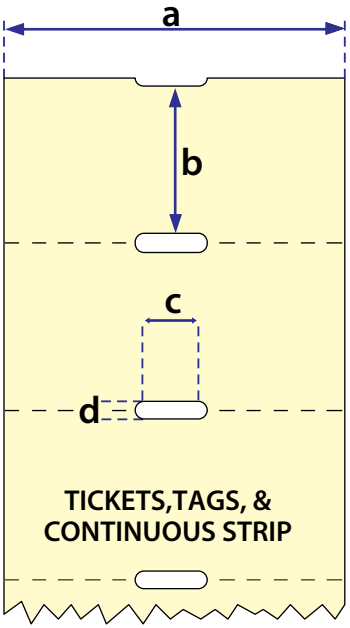
Minimum:	28 mm	(1.10 inches)

← d → Black mark height:

Maximum:	10 mm	(0.39 inches)
Minimum:	3 mm	(0.012 inches)

The black mark sensor is offset 10 mm (0.394 inches) to the right of the center of the media path.

Max. reflectance 5% at 940 nanometer. Carbon black.



Transfer Ribbons

Important!
Intermec thermal transfer ribbons are engineered specifically for the EasyCoder printheads.

Intermec offer three types of thermal transfer ribbons optimized for different purposes:

- ***General Purpose (GP/TMX 1100, TMX 1500)*** transfer ribbons allow high speed printing and give a good printout, but are somewhat sensitive to smearing. They may be the best choice for uncoated and coated papers.
- ***High Performance (HP/TMX 2500)*** transfer ribbons allow high speed printing and gives a highly readable and defined printout on most face materials with smooth surfaces. They have good "smear resistance" and are most suitable for intricate logotypes and images on matte coated papers and synthetic face materials.
- ***High Resistance (HR/TMX 3200)*** transfer ribbons give an extremely durable printout, which is resistant to most chemical agents and high temperatures. However, such transfer ribbons set high demands on the receiving face material, which must be very smooth, such as polyesters.

  The use of HR/TMX 3200 ribbons requires the print speed and the energy supplied by the printhead to be controlled with great accuracy according to the receiving face material. Consult your Intermec distributor.

Interfaces

Parallel Interface

Handshake: DSTB to printer and BUSY to host.
Printer connector: 36-pin female Centronics connector.

Pin	Signal Name	Transmitter
1	-Strobe	Host
2–9	Data 0–7	Host
10–11	Busy	Printer
12	Paper empty	Printer
13	Select	Printer
14–15	Not connected	
16	Signal ground	
17	Chassis ground	
18	+ 5V DC	Max. 500 mA[1]
19–30	Signal ground	
31	-Init	
32	-Fault	
33	Signal ground	
34–36	Selectin	

Serial Interface

Printer connector: DB-9pin female RS-232 connector.

Host		EasyCoder C4			Host	
Signal	DB-9	DB-9	Signal	DB-9	DB-25	Signal
		1	+5V 500 mA[1]	1		
RXD	2	2	TXD	2	3	RXD
TXD	3	3	RXD	3	2	TXD
DTR	4	4	–	4	20	DTR
GND	5	5	GND	5	7	GND
DSR	6	6	RDY	6	6	DSR
RTS	7	7	–	7	4	RTS
CTS	8	8	RDY	8	5	CTS
		9	–	9		

*[1]/. The combined load on the external +5V on both the parallel and the serial port must not exceed a **total** of 500 mA.*

Firmware Upgrading

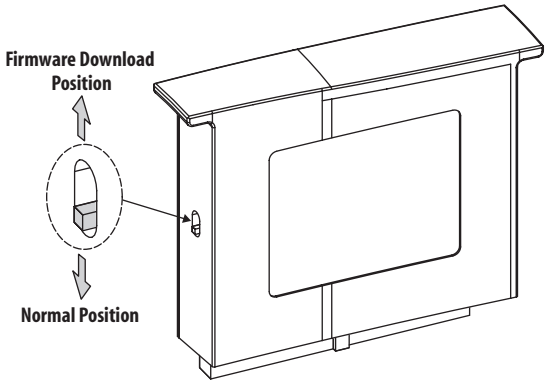
Requirements

To upgrade the printer's firmware, you will need the following:

- A ZIP file containing the upgrading files[1] (available from Intermec).
- A memory cartridge with 1 MB flash and 256K SRAM (P/N 1-092103-00).
- A host computer running Microsoft Windows 95/98 with a parallel connection to the EasyCoder C4. (No other operating system is presently supported.)

Instructions

1. Move the switch on the memory cartridge to **normal** position (see below) and insert the cartridge (see Chapter 1).



2. Connect the printer to the host computer using a parallel communication cable and switch on the equipment.
3. Extract the zipped upgrading files into a common directory on the computer.
4. Browse to the file "download.exe" and run it. A window with a status bar and a large button will appear on the computer screen.
5. Click on the large button to start transferring the file to the printer. The indicator lamp on the printer will start blinking red. Check the status bar on the screen and wait until a message appears, telling that the transfer is finished. This process may take between 40 seconds and a couple of minutes depending on type of computer.

[1]/. A ready-programmed upgrading memory cartridge can be obtained from Intermec. In this case, start at step 9 in the step-by-step instructions. Recommended if you cannot use MS Windows 95/98.

Instructions, cont.

6. Quit the program by clicking "OK" and close the window.
7. Switch off the printer and remove the cartridge by pressing the sides and pulling it straight up.

> ***CAUTION!***
> *If the cartridge is removed at an angle, the connector pins may be bent.*

8. Move the switch on the side of the cartridge to the **upper** position (see the previous page).
9. Insert the cartridge.
10. Switch on the printer. The indicator lamp will start blinking during the upgrading. Wait until the blinking stops, which takes about 40 seconds.
11. Switch off the printer and remove the memory cartridge. Put back the cover over the memory cartridge slot.
12. Press the Feed key and keep it pressed and at the same time switch on the power to the printer (also see "Test Mode" on page 26). A test label will be printed. Check the version number on the test label to verify that the upgrading has been successful.
13. You can use the same memory cartridge to upgrade several printers by moving the cartridge from printer to printer and perform steps 10 to 12. Be careful not to change the position of the memory cartridge switch until all printers have been upgraded.
14. The cartridge can be used as a normal memory expansion cartridge after the upgrading is completed. Move the switch back to normal position, insert the cartridge in a printer, and switch on the printer. The memory cartridge will then be formatted automatically.

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EasyCoder C4 User's Guide

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